

Design Number 3MU/AF 240-03

May 02, 2013

APPLIED FIREPROOFING

Jet Fire Plate

3M Company

3M™ Interam™ E-5 and E-5A-4 Series Endothermic Mat
ISO 22899-1:2007(E), Determination of the Resistance to

Jet Fires of Passive Fire Protection Materials

Temperature Rise 13°C – Time 15 minutes

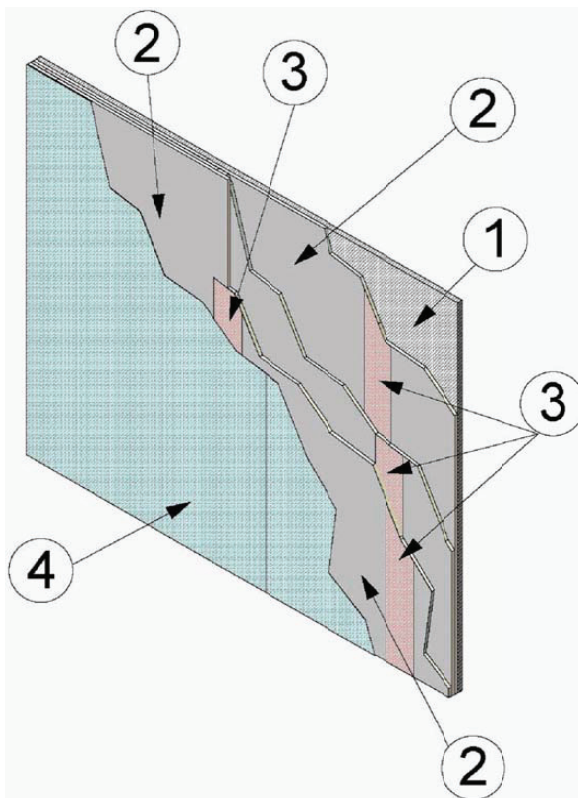
Temperature Rise 35°C – Time 30 minutes

Temperature Rise 99°C – Time 60 minutes

Temperature Rise 208°C – Time 120 minutes

Temperature Rise 242°C – Time 180 minutes

Temperature Rise 251°C – Time 240 minutes



1. **STEEL PANEL:** A steel panel constructed of 10mm (0.39 in.) thick steel complying with ISO 630:1995, Grade Fe 430 representing steelwork with no corners or edge features or cylindrical vessels, pipes and tubular sections of outside diameter greater than 500mm (19.7 in.).
2. **CERTIFIED MANUFACTURER:** 3M Company
CERTIFIED PRODUCT: Applied Fireproofing
MODEL: 3M™ Interam™ E-5 and E-5A-4 Series Endothermic Mat
- ENDOTHERMIC MAT:** Install 3 layers of foil faced flexible mat tightly over the steel panel (Item 1). Install first layer with continuous vertical sections of Endothermic Mat with vertical joints fit tightly together and foil facing away from the steel panel. Adhere first layer to the steel panel (Item 1) using 3M Hi-Strength 90 Adhesive applied to the steel and the back of the first layer being applied. Use rollers over the entire layer to ensure complete adhesion is achieved. Tape all joints of first layer with Aluminum Tape (Item 3) and use rollers over tape to ensure complete adhesion. Install each additional layer with continuous vertical sections of Endothermic Mat with vertical joints fit tightly together and foil facing away from the previous layer. Install each additional layer with joints offset minimum 51mm (2 in.) from joints of the previous layer. Adhere each additional layer to the previous layer of Endothermic Mat using 3M Hi-Strength 90 Adhesive applied to the face of the previous layer and to the back of the current layer being applied. Use rollers over the entire layer to ensure complete adhesion is achieved. Tape all joints of each additional layer with Aluminum Tape (Item 3).
3. **ALUMINUM TAPE:** Apply 102mm (4 in.) wide pressure sensitive tape with aluminum foil facing to all joints of each layer of the Endothermic Mat (Item 2).
4. **STEEL SHEATHING:** Install 1 layer of 26GA (0.455mm (0.0179 in.) thick) T-304 stainless steel sheeting over the Endothermic Mat (Item 2) in continuous vertical sheets. Install steel sheathing with minimum 76mm (3 in.) overlap at joints to create a stepped surface installation. Adhere each piece of Steel Sheathing to the final layer of Endothermic Mat (Item 2) using 3M Hi-Strength 90 Adhesive applied to the edges of the back of the Steel Sheathing face of the corresponding locations on the final layer of Endothermic Mat (Item 2).
5. **PINS (Not Shown):** Install nominal 35mm (1-3/8 in.) long, 12 GA (2.70mm (0.106 in.) thick) stainless steel cup head pins with a minimum 38mm (1-1/2 in.) washer. Install pins by pre-drilling holes through the Steel Sheathing (Item 4) and the Endothermic Mat (Item 2) with a 11mm (7/16 in.) drill bit and welding the pins to the Steel Panel (Item 1). Pins shall be spaced both vertically and horizontally 305mm (12 in.) on center.

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